

1 **ABSTRACT**

2 An architecture for processing an Extensible Markup Language (XML)
3 document converts schema elements in the XML document to data type definition
4 (DTD) objects that can be used to validate data elements in the XML document.
5 The architecture utilizes a node factory design in which an XML parser calls one
6 or more node factory interfaces to construct an in-memory tree representation of
7 an XML document. One of the node factory interfaces is a schema node factory,
8 which is a thin layer that receives calls from the parser to build nodes in the tree
9 representation and translates those calls to calls to a schema builder. The schema
10 builder is a table driven interface that converts the schema elements in the XML
11 document into DTD objects. The DTD objects are then used to validate the data
12 elements as belonging to the schema. If valid, the data elements are used to
13 construct the tree representation.

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